

within the six-month statutory period. Since April 13, 2003 fell on a Sunday, the due date becomes Monday, April 14, 2003. Should such request or fee be deficient or absent, consider this paragraph such a request and authorization to withdraw the appropriate fee under 37 C.F.R. §§ 1.16 to 1.21 from Williams, Morgan & Amerson, P.C. Deposit Account No. 50-0786/2039.006100RFE.

Reconsideration of the application in view of the following remarks is respectfully requested.

#### REMARKS

##### *1. Status of claims*

Claims 1-17 are pending.

##### *2. Claim rejections under 35 U.S.C. §103*

First, claims 1-12 and 16-17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ching et al., U.S. Pat. No. 5,744,246 (hereinafter "Ching") in view of Nordstrom, U.S. Pat. No. 3,536,687 (hereinafter "Nordstrom"). Applicants respectfully traverse this rejection.

The present claims are directed to multi-layer rigid containers comprising at least an inner layer providing substantially all of the interior surface of the rigid container, an outer layer and a core layer substantially coextensive between the inner layer and the outer layer, wherein the inner and outer layers are comprised of an aromatic polyester or copolyester, and wherein the core layer is comprised of (i) an oxygen scavenging polymer comprising a polymer backbone and cyclic olefinic pendent groups covalently linked to the polymer backbone; and (ii) a

transition metal catalyst. In short, the present claims can be considered to be directed to containers comprising an oxygen scavenging wall.

Ching, in contrast, is directed to oxygen scavenging ribbons (col. 3, lines 51-53). Ching turned to oxygen scavenging ribbons because oxygen scavenging walls, comprising oxidizable polymers and metal catalysts, were known in the art and exhibited a number of drawbacks. Specifically, the drawbacks included impairment of the strength and integrity of the package as an oxidizable polymer was broken down by oxygen; release of potentially non-GRAS reaction products into the package contents; and impairment of the gloss and appearance of the surface of the package as a result of oxygen consumption at the surface (col. 2, lines 16-27). Therefore, Ching teaches away from packages having oxygen scavenging walls.

Nordstrom is directed to oxidizable polymers comprising cyclohexenyl side chains. The skilled artisan would have no reasonable expectation that the polymers of Nordstrom could be used as oxidizable polymers in oxygen scavenging walls of packages without also exhibiting the drawbacks pointed out by Ching, as described above. The polymers of Nordstrom undergo crosslinking in air (col. 5, lines 65-69), which indicated the possibility that such polymers, when used in an oxygen scavenging wall, could crosslink with other unsaturated polymers in the wall to lower the strength, integrity, or appearance of packages or to generate potentially non-GRAS fragments capable of entering the package contents. The effectiveness of polymers comprising cyclohexenyl side chains in oxygen scavenging walls thus could not be predicted before the relevant experiment was performed.

For these reasons, Applicants attest claims 1-12 and 16-17 are patentable over Ching in view of Nordstrom, and respectfully request this rejection be withdrawn.

Second, claims 13-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ching and Nordstrom, in view of Katsumoto et al, U.S. Pat. No. 6,139,770 (hereinafter “Katsumoto”). Applicants respectfully traverse this rejection.

Ching and Nordstrom are as described above. Katsumoto describes photoinitiators which can be used to shorten the induction period of oxygen scavenging. However, Katsumoto does not address how to minimize the drawbacks of oxygen scavenging walls as discussed above. Therefore, Applicants attest that this combination of references does not render the oxygen scavenging wall of claims 13-15 obvious, and respectfully request that this rejection be withdrawn.

### *3. Claim rejections under 35 U.S.C. §112*

Claims 1-17 are rejected under 35 U.S.C. §112, first paragraph, as containing new matter. Applicants respectfully traverse this rejection.

Though not *in haec verba*, the phrases “an inner layer providing substantially all of the interior surface of the rigid container” and “a core layer substantially coextensive between the inner layer and the outer layer” indeed draw support at pp. 8, 11, and 12, and Examples 2-10. Applicants respectfully point to various relevant passages with appropriate comments.

Page 8, lines 20-22 refer to multilayer packaging articles comprising “*an* inner food contact layer” (emphasis added), which provides support for an inner layer providing substantially all of the interior surface of the rigid container.

Page 11, lines 1-13 and 16-23, refer to multilayer packaging articles, such as bottles, comprising inner and outer layers of aromatic polyester or copolyester and an oxygen scavenging layer between the inner and outer layers. Given the standard use of “comprising X, Y, and Z” to

mean “containing X, Y, Z, and possibly other components,” these passages support an inner layer providing substantially all of the interior surface of the rigid container. A skilled artisan would understand the passage referring to an oxygen scavenging core layer between the inner layer and the outer layer as indicating, as of the filing date of the present application, Applicants possessed packaging articles wherein the core layer is substantially coextensive between the inner layer and the outer layer.

Page 12, lines 4-6, refer to adhesion between the oxygen scavenging layer and the inner and outer layers. No mention is made of adhesion directly between the inner and outer layers, which indicates to the skilled artisan that Applicants possessed packaging articles in which the inner and outer layers were not directly in contact, *i.e.*, the oxygen scavenging layer was substantially coextensive between the inner layer and the outer layer.

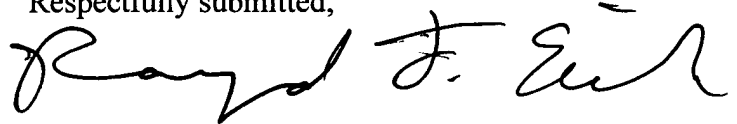
Examples 2-10 refer to multilayer films having a PET/OSP/PET structure, wherein “PET” refers to a layer comprising polyethylene terephthalate, an aromatic polyester, and “OSP” refers to a layer comprising EMCM, a scavenging polymer. The films were made on a Randcastle extruder, as described in Example 2. Though not explicitly stated in Example 2, the skilled artisan would understand that the films were made such that the OSP layer was substantially coextensive with the inner and outer PET layers. This understanding would be provided by the Table of Example 2, which refers to the film as having a thickness of about 3.8 mil and the three layers as having thicknesses of about 1 mil, about 2 mil, and about 1 mil for the inner, OSP, and outer layers, respectively. Given that only a single thickness was given for each of the three layers, and the overall thickness of the film was constant, the skilled artisan would conclude that the films of Examples 2-10 had OSP layers substantially coextensive with the inner and outer PET layers.

For these reasons, Applicants attest that the subject matter of claims 1-17 finds support in the specification as originally filed, and no new matter has been claimed. Therefore, Applicants respectfully request this rejection of claims 1-17 be withdrawn.

*4. Closing remarks*

In conclusion, Applicants attest that all pending claims 1-17 are in condition for allowance. The Examiner is invited to contact the undersigned patent agent at (713) 934-4065 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Raymund F. Eich". The signature is fluid and cursive, with the first name "Raymund" being more prominent.

Raymund F. Eich, Ph.D.  
Reg. No. 42,508

AGENT FOR APPLICANTS

WILLIAMS, MORGAN & AMERSON, P.C.  
10333 Richmond, Suite 1100  
Houston, Texas 77042  
(713) 934-4065  
(713) 934-7011 (fax)

April 14, 2003